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**U S WEST, Inc.**  
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Washington, DC 20036  
202 429-3136  
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**USWEST**

**Kenneth T. Cartmell**  
Executive Director - Federal Regulatory

June 29, 2000

Mr. Dale Hatfield  
Chief, Office of Engineering and Technology  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, Room 7-C155  
Washington, DC 20554

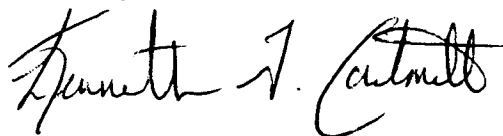
RE: CFR 47, Section 63.100  
Final Service Disruption Report, Platteville, CO  
PTVLCOMA

Dear Mr. Hatfield:

On May 31, 2000, U S WEST Communications (USWC) experienced a Service outage in Platteville, Colorado. In accordance with the reporting rules, CFR 47, Section 63.100, enclosed is USWC's Final Service Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,



Attachments

cc: Mr. Robert Kimball  
Mr. Doug Sicker

# Final Service Disruption Report

**Reporting Company:** U S WEST

**Location of Disruption:** Platteville, CO

PTVLCOMA

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**1. Date and Time of Incident:**

May 31, 2000 at 1254 MDT.

**2. Geographic Area Affected:**

Fort Collins, Keenesburg, Wellington, Hudson and Fort Lupton, Colorado were affected.

**3. Estimated Number of Customers Affected:**

Approximately 107,000 U S WEST customers were affected by the outage.

**4A. Types of Services Affected:**

InterLATA, IntraLATA, toll, and 911 services.

**4B. 911 Service Affected:**

911 service for Fort Collins was disrupted. Seven-digit reroutes were performed for the two Central Offices (COs) affected.

**5. Duration of Outage:**

Service was restored to 100,000 US WEST customers in Fort Collins and Wellington at 1539 MDT; service was restored to the remaining customers in Hudson, Keenesburg and Fort Lupton at 1830 MDT. The total duration of the outage was 5 hours 36 minutes.

**6. Estimated Number of Blocked Calls:**

There were approximately 648,700 blocked calls.

**7A. Root Cause of the Incident:**

The root cause of the incident was a fiber cable cut.

A contractor was placing conduit for new electrical service for a local business. Boring to a depth of 40 inches, the contractor struck the U S WEST splice case, severing the cable.

When the fiber was cut the system could not switch to protect. Technicians isolated the failure between Denver Main and Broomfield and found a defective optical transmit card in Denver Main. The card was replaced to restore the service to the ring. All trouble resolution procedures were followed in accordance with the vendor fault isolation/repair documentation.

**7B. Name and Type of Equipment:**

24 Fiber Optic Cable

**7C. Specific Part of Network Affected:**

Interoffice facilities.

**8. Method(s) Used to Restore Service:**

- ◆ The location of the cut was identified using an optical test set.
- ◆ Fiber splicers and equipment were dispatched to the area and CO technicians began patch and reroute operations.
- ◆ Portions of the cable are on a fiber ring which did not switch to protect due to a defective transmit card on the protect path. The card was located and replaced, which restored service to Fort Collins and Wellington. Service to the remaining communities was restored as the cable was spliced.

**9. Steps Taken to Prevent Recurrence of Outage:**

The following steps have been or will be taken to prevent recurrence of the outage:

- ◆ The U S WEST facilities were accurately located and a Mark and Standby contractor was on site during the boring activity.
- ◆ The contractor was boring parallel to the fiber and was in the process of coming into the exit hole, when the bore head entered a U S WEST handhold and struck the splice case. The Mark and Standby contractor had approved the exit hole. However, on further investigation, it was discovered that the actual bore path had strayed approximately 13 inches from the projected path. The contractor had failed to maintain the required 18-inch hand dig tolerance zone and will be billed for damages.
- ◆ Fort Lupton and remotes remained isolated until the fiber was spliced. Both SS7 A links ride the fiber north, through Platteville to Greeley, then south to Denver. One of the A links should be reconfigured to go south from Fort Lupton to Denver. This will be addressed by the SS7 Diversity Manager.

**10A. Applicable Best Practice(s):**

U S WEST reviewed Network Reliability: A Report to the Nation, June 1993 and evaluated all recommendations and best practices by focus area. Based on the root cause analysis, the most appropriate focus areas are:

Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

Section F – E911 Systems

Reference 6.1.1 Diverse Routing of Interoffice Facilities

Reference 6.4 Network Management Center

**10B. Best Practice(s) Used:**

Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

Section F – E911 Systems

Reference 6.1.1 Diverse Routing of Interoffice Facilities

Reference 6.4 Network Management Center

**10C. Analysis of Effectiveness of Best Practice(s):**

Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

This recommendation describes cable locate requirements and damage prevention measures.

U S West fully supports this practice. All recommended preventive measures were taken; however the contractor failed to maintain control of the bore head.

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

While this recommendation is specific to Signaling Networks, U S WEST currently requires a root cause analysis on all significant network failures.

Section F – E911 Systems

Reference 6.1.1 Diverse Routing of Interoffice Facilities

This recommendation describes the optimum configuration of two diverse routes for E911.

The offices impacted by the outage were provided diversity via a fiber ring. However, due to the defective card, the service was not able to switch to protect.

Reference 6.4 Network Management Center

This recommendation describes the use of centralized network management centers to monitor the E911 network as a unique entity, separate from the rest of the network.

U S WEST network traffic for E911 trunk groups is monitored in the two regional Network Management Centers. U S WEST also has two Regional Network Reliability Operations Centers with responsibility for monitoring the health of the network.

**Contact Person:**

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**FCC INITIAL REPORT**  
**U S WEST - Large Scale Abnormal Condition Report (LSACR)**  
**Service Disruption Report**

☒ 120 MINUTE REPORT ☐ 3 DAY REPORT

ACR #: CD.000531.007

Date Of Incident: 5/31/00 Time Of Incident: 13:15 MDT

Geographic Area Directly Affected: FT Collins, FT. Lupton, Greeley, Colorado  
(Cities, LATAs, States)

CLI code(s) for affected area: FTCLCOMACGO, FTCLCOMMDSO, FTPLCOMADSO  
GRELCOMADSO

Estimated Number of Customers Affected: 50,000 +  
(i.e. Access lines in the switch, LATA(s) or States(s))

Types of Services Affected (e.g. Local, Toll, 800, 911, FAX, etc.):

Toll, 911

Duration of Outage (Hours & Minutes): ONGOING

Estimated Number of Blocked Calls: UNDER INVESTIGATION

Apparent Cause of Incident: Cable cut (Fiber)

Method Used to Restore Service: UNDER INVESTIGATION

Steps Taken to Prevent Recurrence: UNDER INVESTIGATION

CONTACT PERSON: Kenneth Cartmell-Exec. Dir-Fed Regulatory Ph: 202-429-3136  
 U S WEST  
 1020 19th Street NW Suite 700, Washington, D. C. 20036

Tim Mason  
 Vice President - NROC  
 Ph: (303) 707-5100

U S WEST  
 700 W. Mineral, Littleton, CO 80120

-or-

Dave Rygh  
 Director - Network Management Center  
 Ph: 303-707-5608

U S WEST  
 700 W. Mineral, Littleton, CO 80120

Date Reported to FCC: 5/31/00

Time Reported to FCC: 5/31/00 14:40

Person Faxing Report: DIANE RIECHERT

(Include AM/PM, Time Zone)

Time Confirmed with FCC: \_\_\_\_\_

Telephone Number: 303-707-6877

FCC Contact Name: \_\_\_\_\_

**PRI FAX: Monitoring Watch Officer (202) 418-2812-Confirm at (202) 632-6975**

Secondary FAX: Monitoring Watch Officer (301) 725-2521 - Confirm at (301) 725-2278

(To be used only at the direction of the Primary Fax Monitoring Watch Officer)

Also FAX to: U S WEST Federal Relations Office at (202) 296-5157

Also FAX to: Karen Eccli/Jane Quigley (303) 707-2229

Also FAX to: Glenda Weibel (206) 345-2129

Also FAX to: Bev Sharpe (303) 694-1719